

# ALBERT FRADERA SOLA

I consider myself both collaborative and adaptable. I am always eager to tackle new and different projects. I am very enthusiastic to always share and develop my data visualization skills as a means towards better scientific communication. I am an open-minded person and enjoy having great relationships with my colleagues.



## EDUCATION

Current  
|  
2018



### PhD Candidate in Quantitative Proteomics

JGU University

📍 Mainz, Germany

- PhD thesis: Computational approaches to quantitative proteomics

2017  
|  
2016



### M.Sc. in Omics Data Analysis

University of Vic

📍 Barcelona, Spain

- Master thesis: Soring function for finding Lolium Perenne DEGs
- Erasmus + grant fellow

2016  
|  
2009



### B.Sc. in Biochemistry

University of Barcelona

📍 Barcelona, Spain

- Bachelor thesis: NMR studies on alpha-synuclein
- Erasmus + grant fellow



## RESEARCH EXPERIENCE

Current  
|  
2018



### PhD Candidate

Institute of Molecular Biology

📍 Mainz, Germany

- PhD candidate with Dr. Falk Butter ([F.Butter@imb-mainz.de](mailto:F.Butter@imb-mainz.de))
- Publications: 1 first-author paper (in revision), 5 co-author papers

2017



### Master Student

Institute of Biological, Environmental and Rural Sciences

📍 Aberystwyth, UK

- MSc student with Dr. Narcis Fernandez-Fuentes ([naf4@aber.ac.uk](mailto:naf4@aber.ac.uk))
- Publications: 1 first-author paper, 1 co-author paper



## WET LAB PROJECTS AND RELATED SKILLS



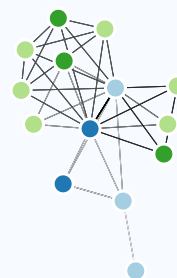
### Immunoprecipitation of RNA-binding proteins in *S. cerevisiae*

- I was responsible for designing the experimental setup and generating the data for the RNA-binding protein interactome investigation.
- Keywords: Yeast | Protein Immunoprecipitation | Experimental design



### Mass spectrometry quantitative proteomics

- I used chemical labeling (DML) and label-free mass spectrometry sample preparation protocols on several projects
- Keyword: Mass spectrometry | DML | LFQ | In-gel digestion



## My CV as an interactive network

Bullet points (Blue, for 🎓 and 🧪, and green, for 📄 and 🗣️) are linked by year. Interactive version [here](#)

## CONTACT

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## SOFTWARE SKILLS



## LANGUAGE SKILLS





## DRY LAB PROJECTS AND RELATED SKILLS

- **Network-based assignment of RNA-binding proteins functionality**

- Function-based networks were created from quantitative proteomics data and made accessible through a shiny app.
- Keywords: Network | Functional analysis | KEGG | GO | R Shiny

- Temporal proteome profiling of *Xenopus* and *Leishmania* species

- Differential expression of proteomes was investigated at various stages
- Clustering (Self Organizing Maps) and dimensionality reduction techniques (Principal Component Analysis) were applied.
- Keywords: Proteome | Differential expression | SOM | PCA | Clustering

- **Scoring function for RNA-Seq differential expression assessment**

- A scoring function was developed around three RNA-Seq differential expression assessment R packages (DESeq2, edgeR, limma+voom)
- Keywords: NGS | RNA-Seq | Quality control | Differential expression

## ChIP-Seq characterization of a novel ATPase in *T. brucei*

- H2A.Z deposition was investigated and visualized with genome tracks
- Keywords: NGS | ChIP-Seq | Genome tracks



## SELECTED PUBLICATIONS

### ● Projects with Genomics Analysis

- 2022 | PLoS Pathogens | <https://doi.org/10.1371/journal.ppat.1010514>
- 2021 | Nature Communications | <https://doi.org/10.1038/s41467-021-22861-2>
- 2021 | PLoS One | <https://doi.org/10.1371/journal.pone.0249636>
- 2019 | PLoS One | <https://doi.org/10.1371/journal.pone.0220518>

### ● Projects with Proteomics Analysis

- 2021 | Journal of Cell Science | <https://doi.org/10.1242/jcs.254300>
- 2020 | RNA | <https://doi.org/10.1261/rna.076281.120>



## CONFERENCES AND COURSES

## Conferences

- 2022 | Statistical data analysis for genome-scale biology |Flash talk
- 2021 | Network biology |Plenary talk
- 2019 | FEBS advanced course |Poster presentation

## Courses

- 2022 | Data visualization for scientists
- 2021 | Scientific writing
- 2020 | Convincing scientific presentations



### Publication abstract's wordcloud

Document created with the R  
packages **pagedown** and  
**datadrivency**.

The source code is available on [github](#).

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